



International Operations & Maintenance
Conference in the Arab Countries

Under the theme of

The Integration of Maintenance and Asset Management

 15-16 December 2020

ORGANIZER



ORGANIZING PARTNER



THE TRANSPORT SYSTEM IS UNDER PRESSURE

Asset Management and Maintenance in Volatile Demand

www.omaintec.com



info@omaintec.com



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Transport System - General



Vehicles

Narrow-body: 100'000'000 USD

Life:
10-15 y



International
Regulation
and Laws

Widebody: 250'000'000 USD



Mild-Hybrid Diesel: 500'000 USD

Life:
1.5m km



National
Certifications

Electric with Battery: 800'000 USD

Locomotive: 4'500'000 USD

International Regulation
National Laws



Life: 40 y

Train composition: 25'000'000 USD

Why maintenance?

In general context:

- To maintain operational stability
- To protect the asset (value)
- To protect the company (safety)

In a volatile demand (drop):

- To minimize the risk
- To protect the asset (value)
- To reduce costs (operation)
- To protect the company (safety)

Public Transport System in CHE (Switzerland)



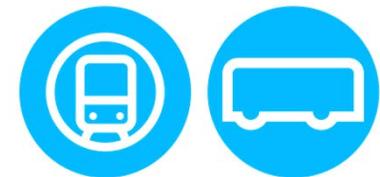
Public Transport System in CHE (Switzerland)



Public Transport System in CHE (Switzerland)



Public Transport System in CHE (Switzerland)



Transport System - Aviation



International agreements

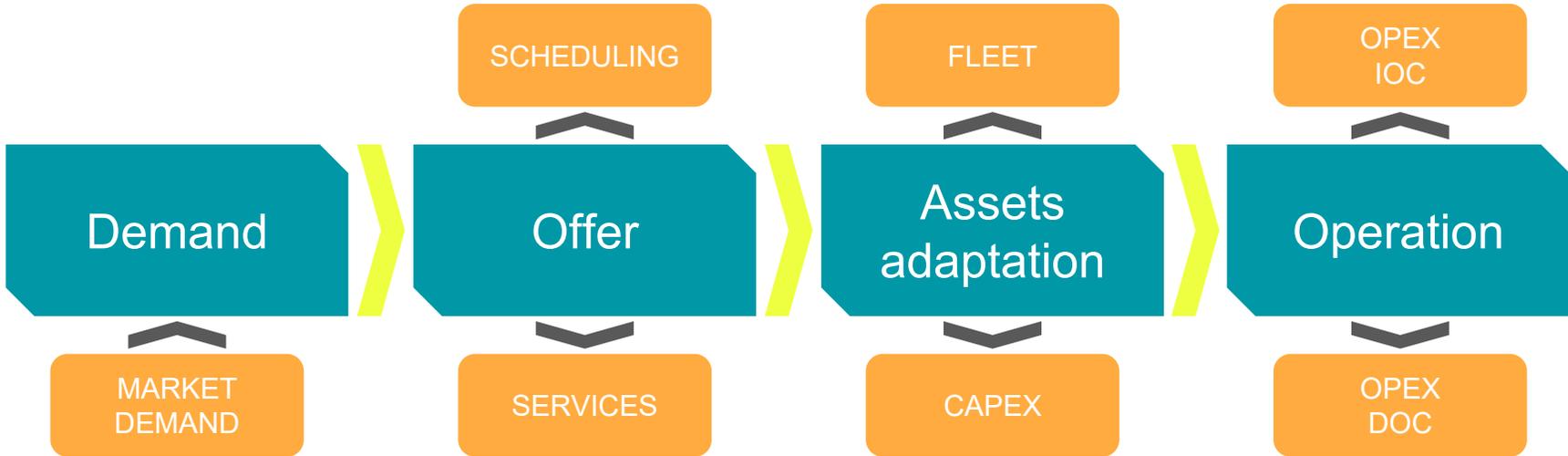
Traffic Rights, e.g. passengers limitations, days of operations, overflights, etc....

Entry requirements

Visa, Medical conditions, etc....



Transport System - Aviation



International agreements

Traffic Rights, e.g. passengers limitations, days of operations, overflights, etc...

Entry requirements

Visa, Medical conditions, etc...



Demand

Demand
2019



+1.8%

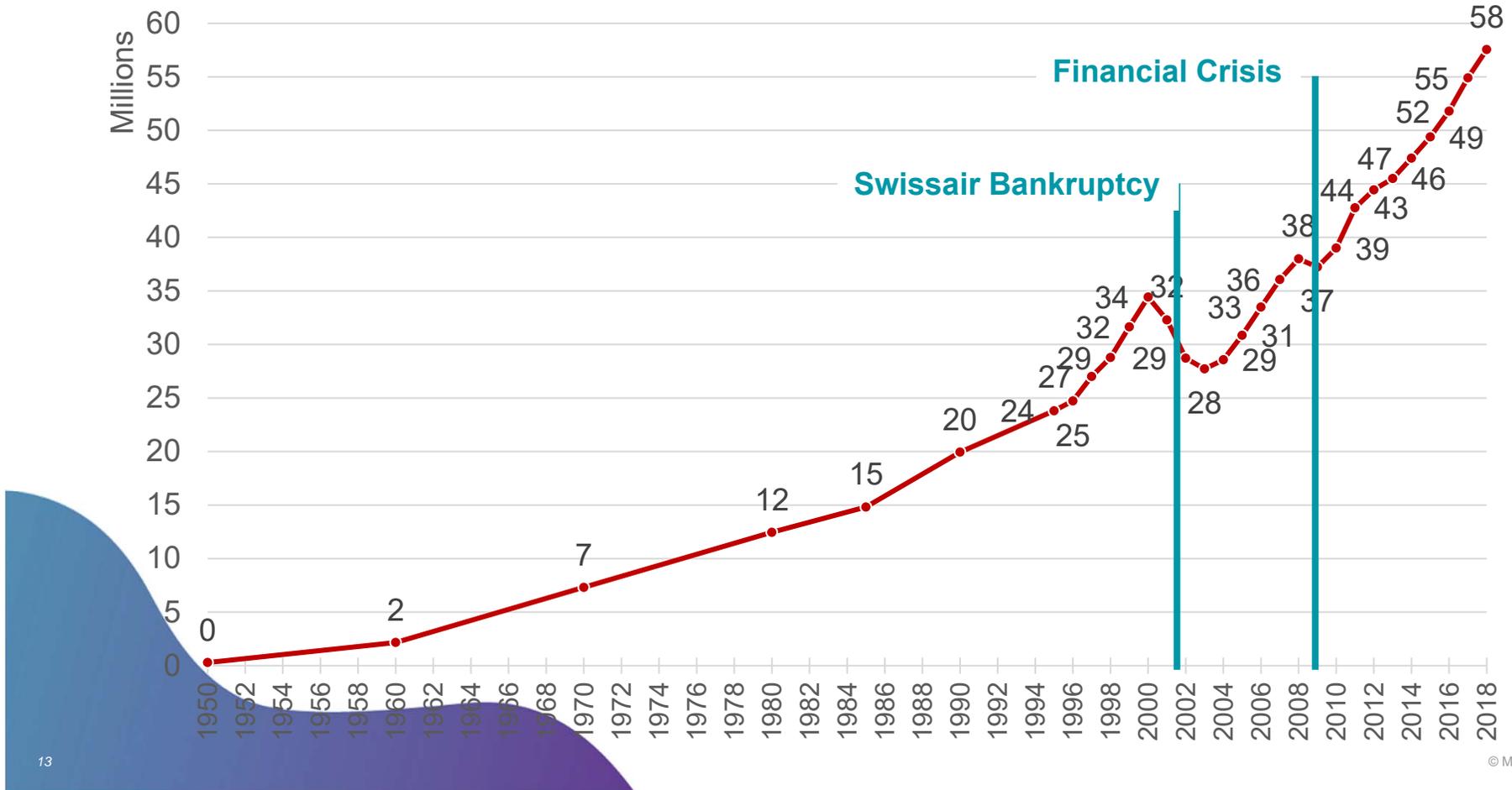


+5.6%

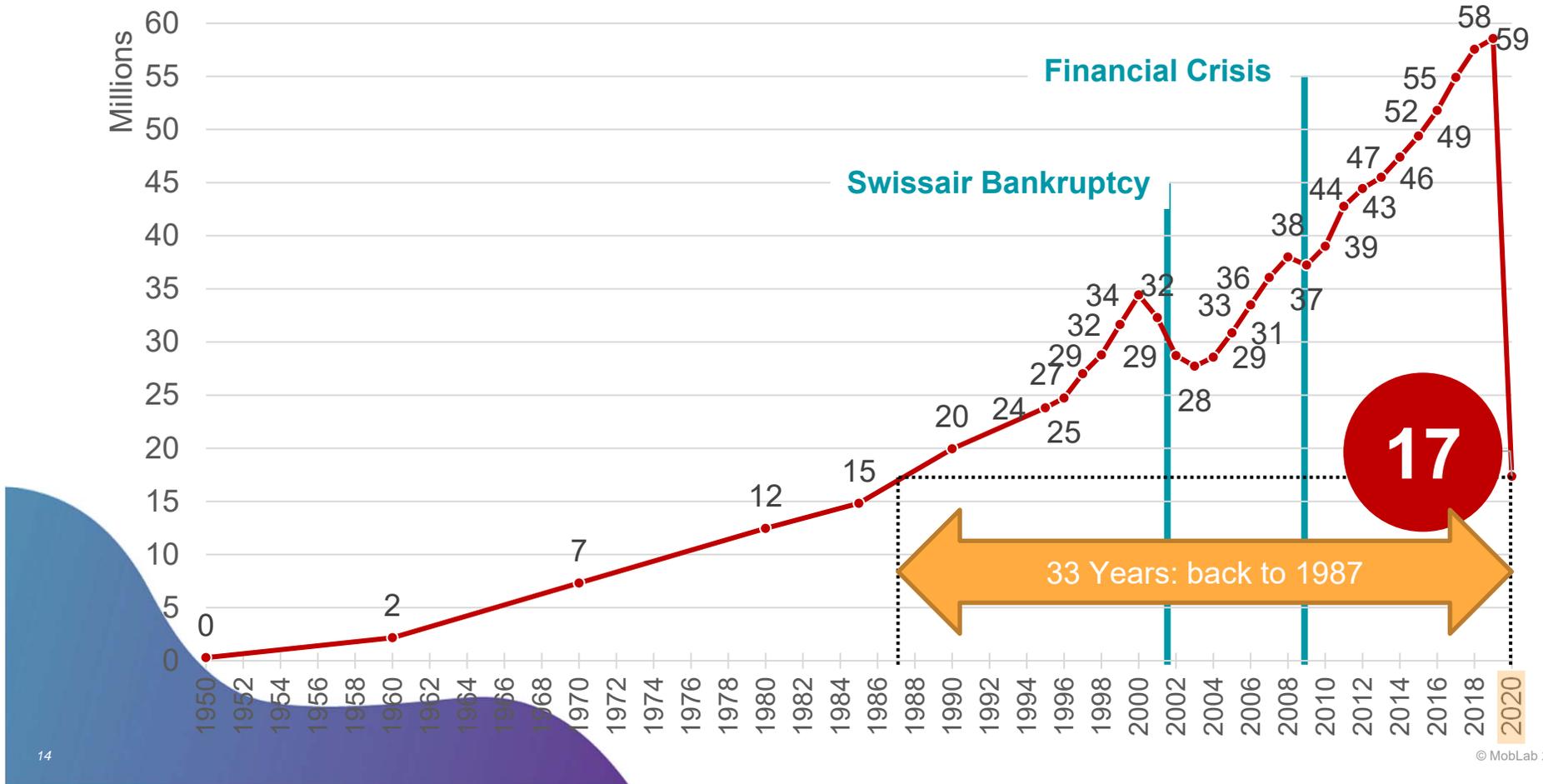
Demand
2019

Baseline 2018 / 2019

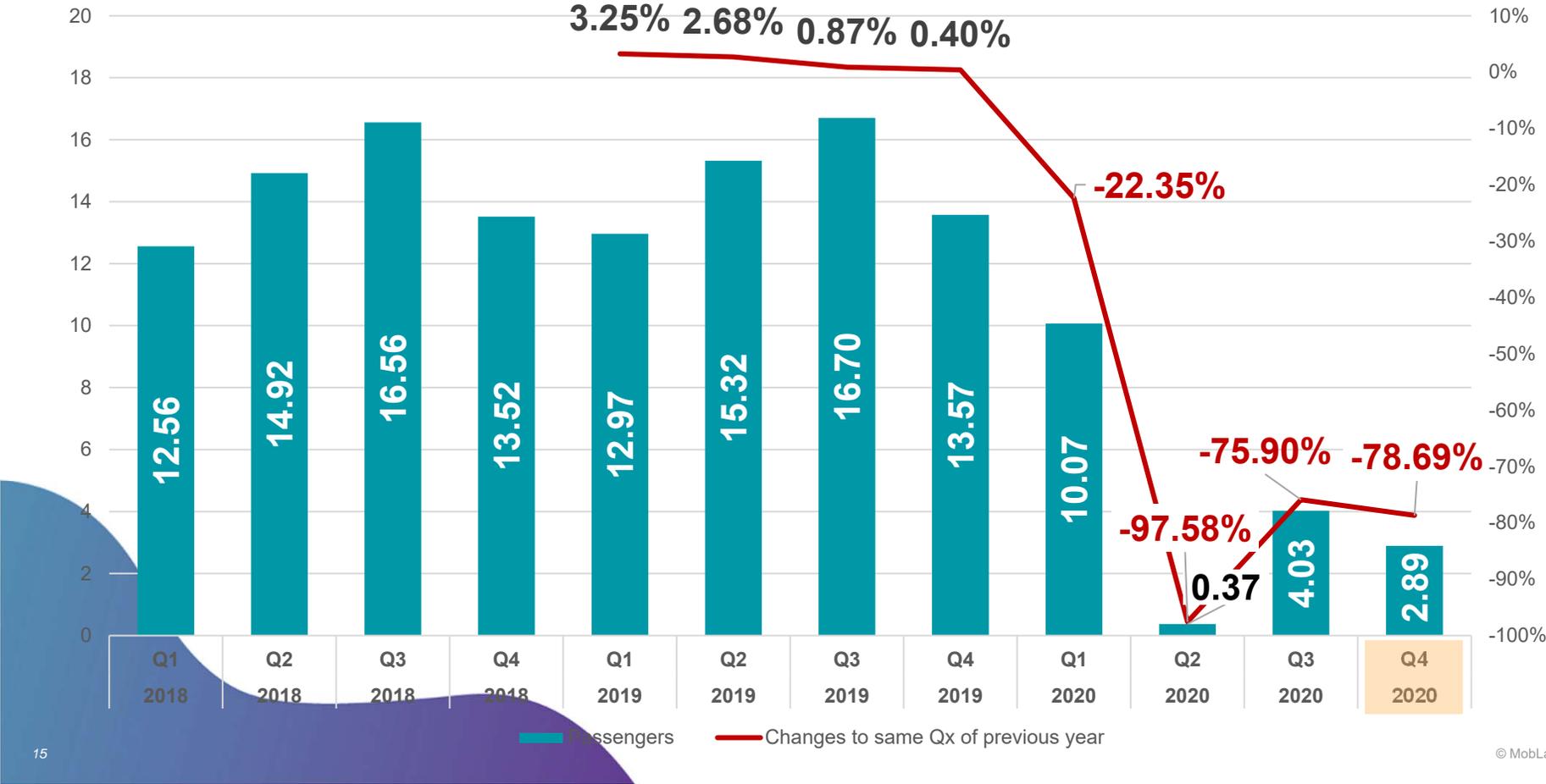
Aviation: # of Passenger in Switzerland



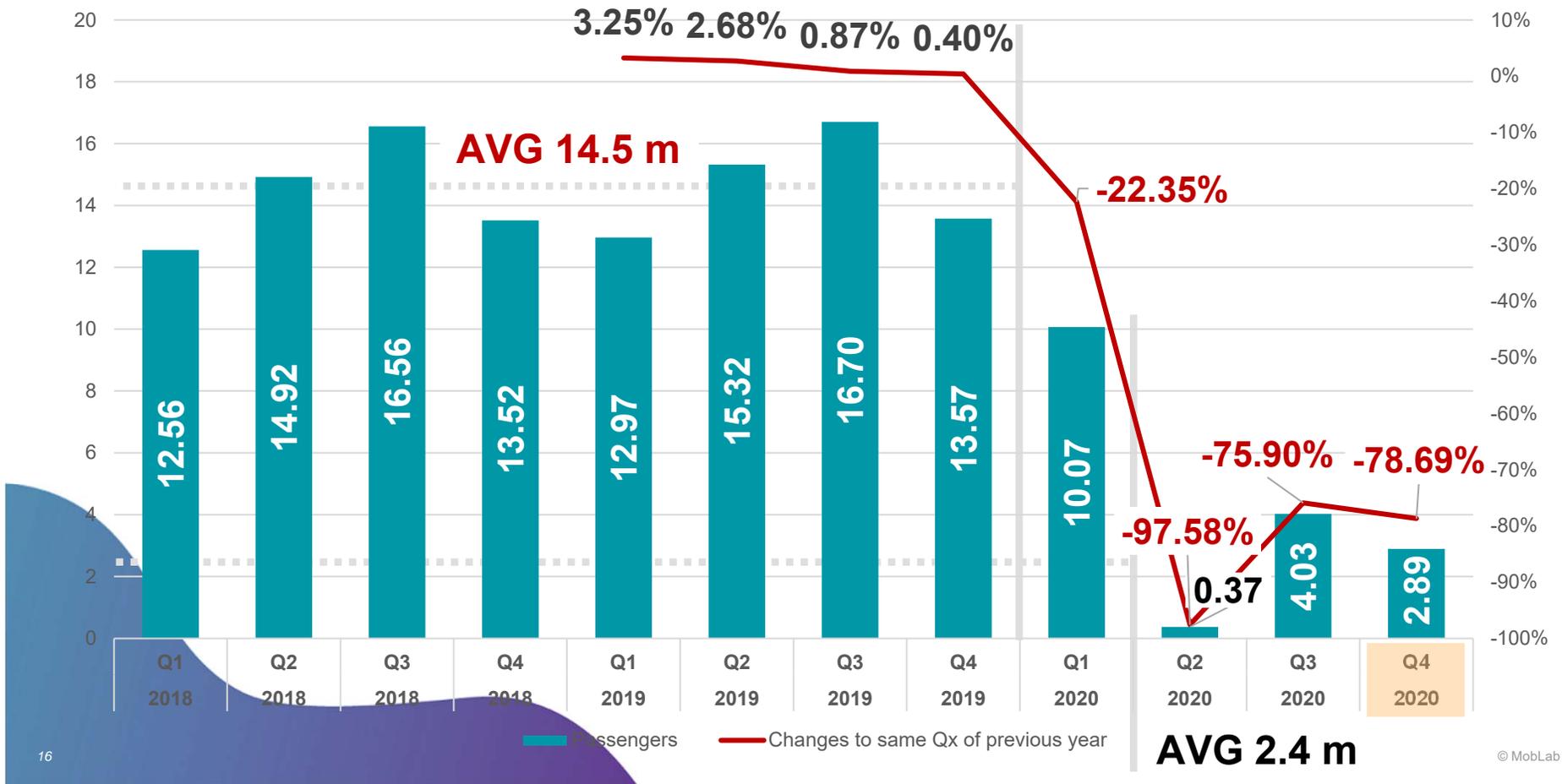
Aviation: # of Passenger in Switzerland – Fx



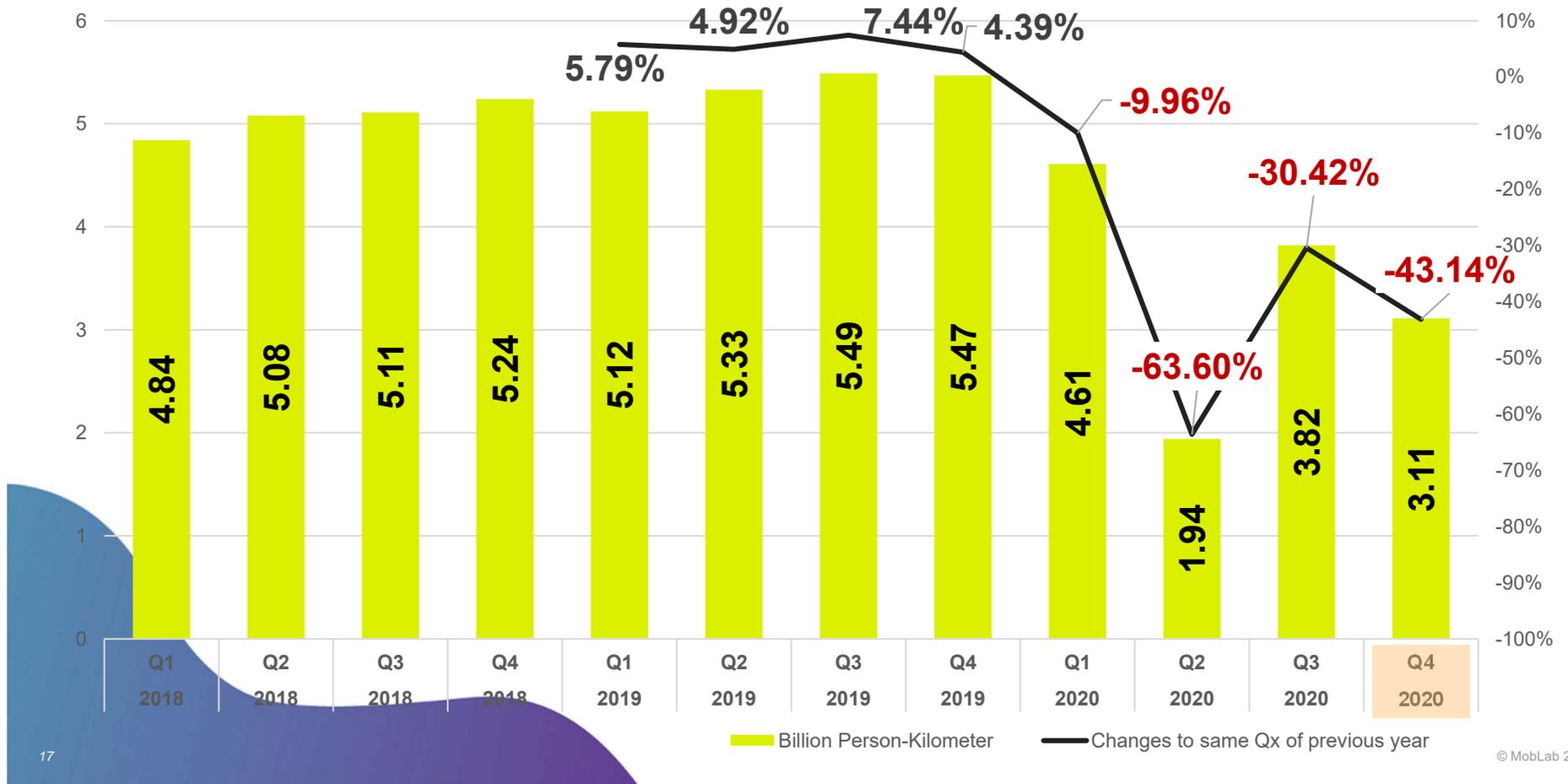
Aviation: # of Passenger in Switzerland – Fx



Aviation: # of Passenger in Switzerland – Fx



Rail: Billion-Passenger-km in Switzerland – Fx



Demand

Demand
2019



+1.8%



+5.6%

Demand
2019

Baseline 2018 / 2019

Demand



Demand
2019

+1.8%

+5.6%

Demand
2019

Demand
2020 (Q1-Q3)

-68%

-35%

Demand
2020 (Q1-Q3)

Demand (Forecast)
2020 (Q1-Q4)

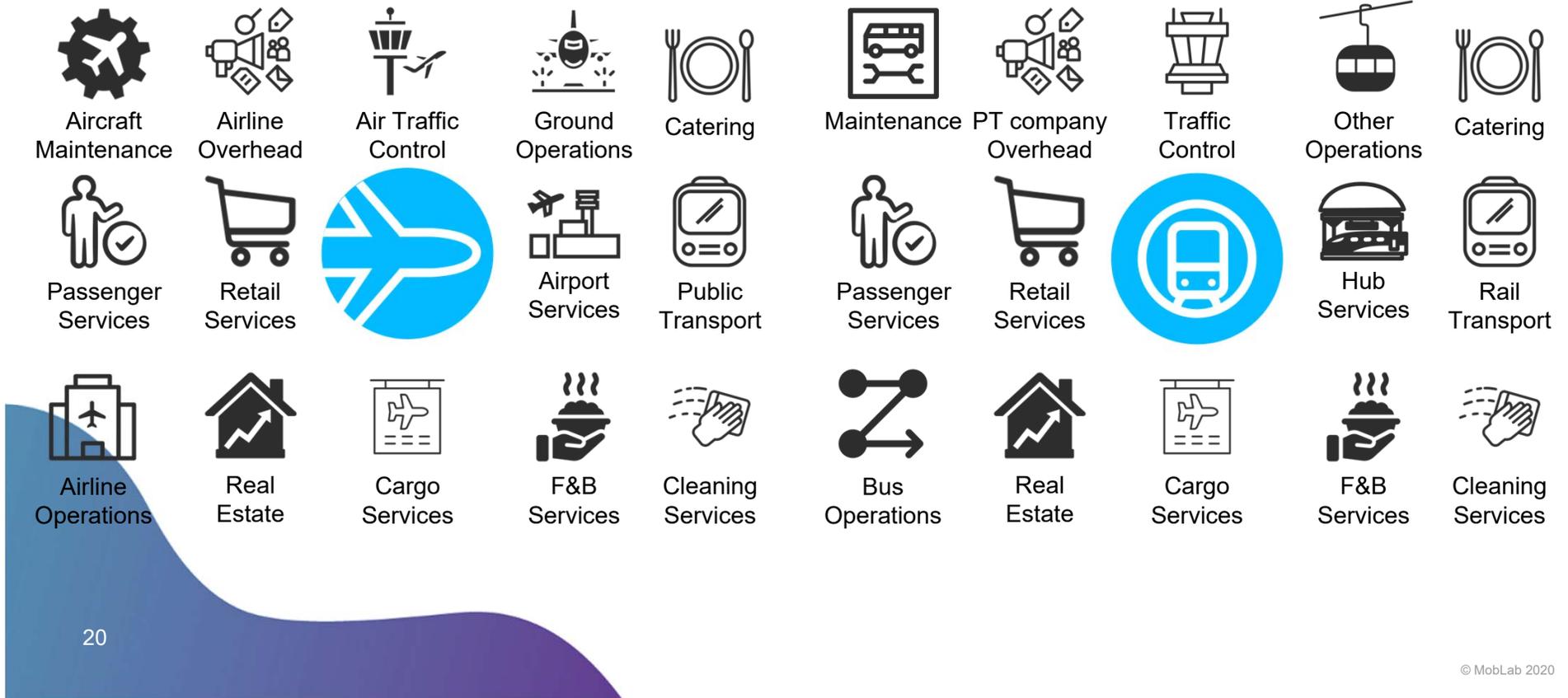
-70%

-37%

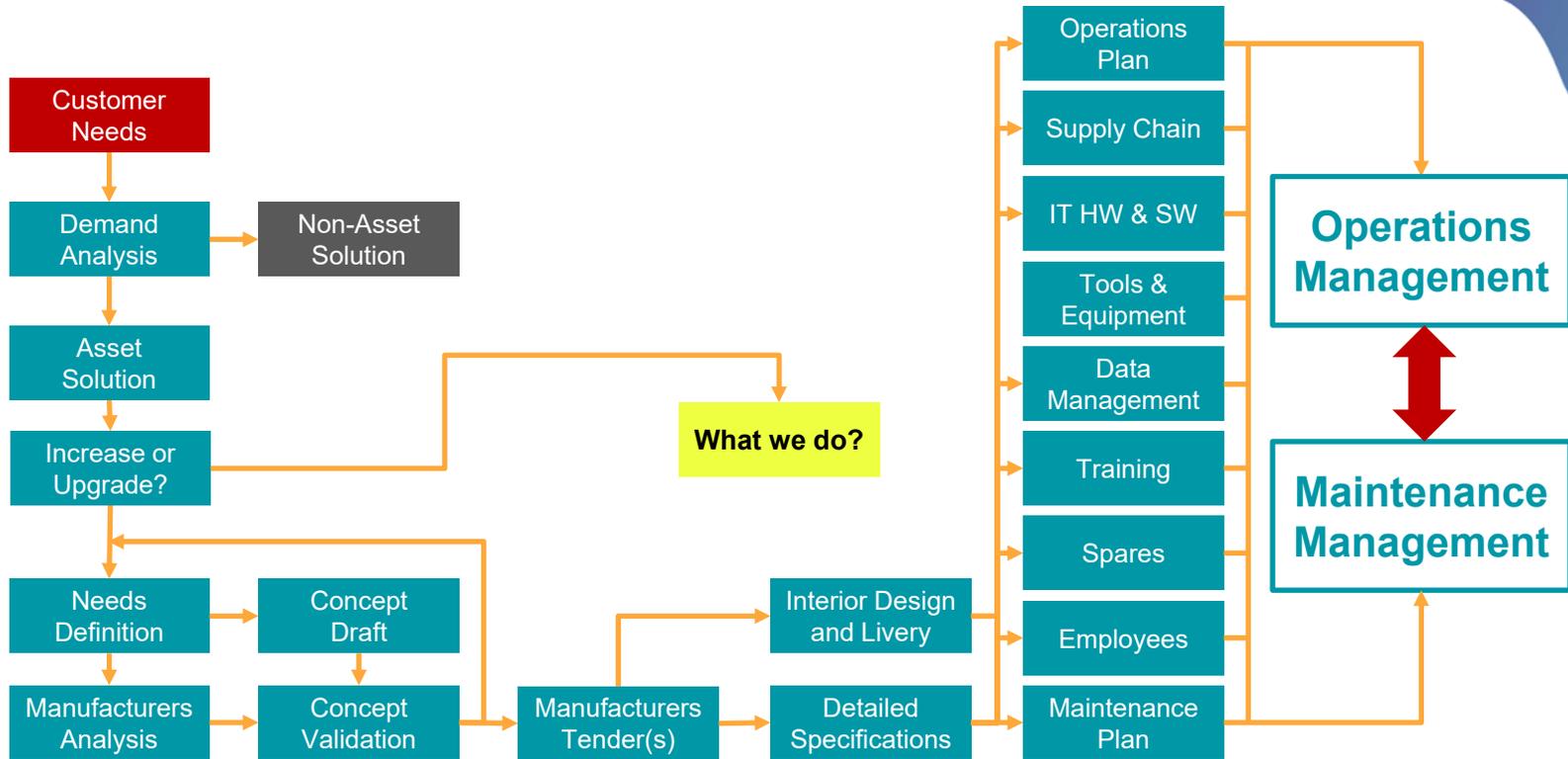
Demand (Forecast)
2020 (Q1-Q4)

Baseline 2018 / 2019

Cross-industry impact

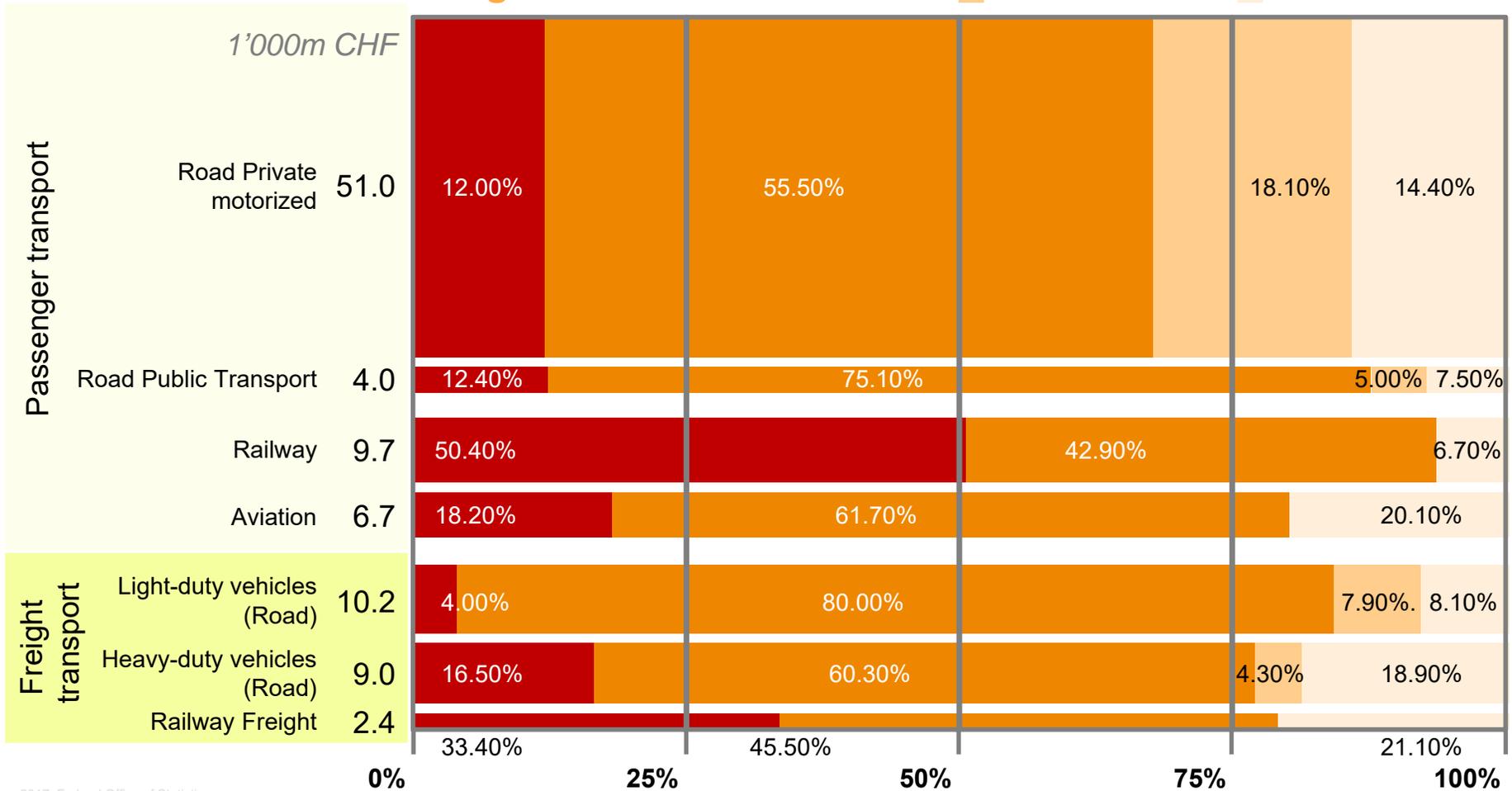


Process & Analysis



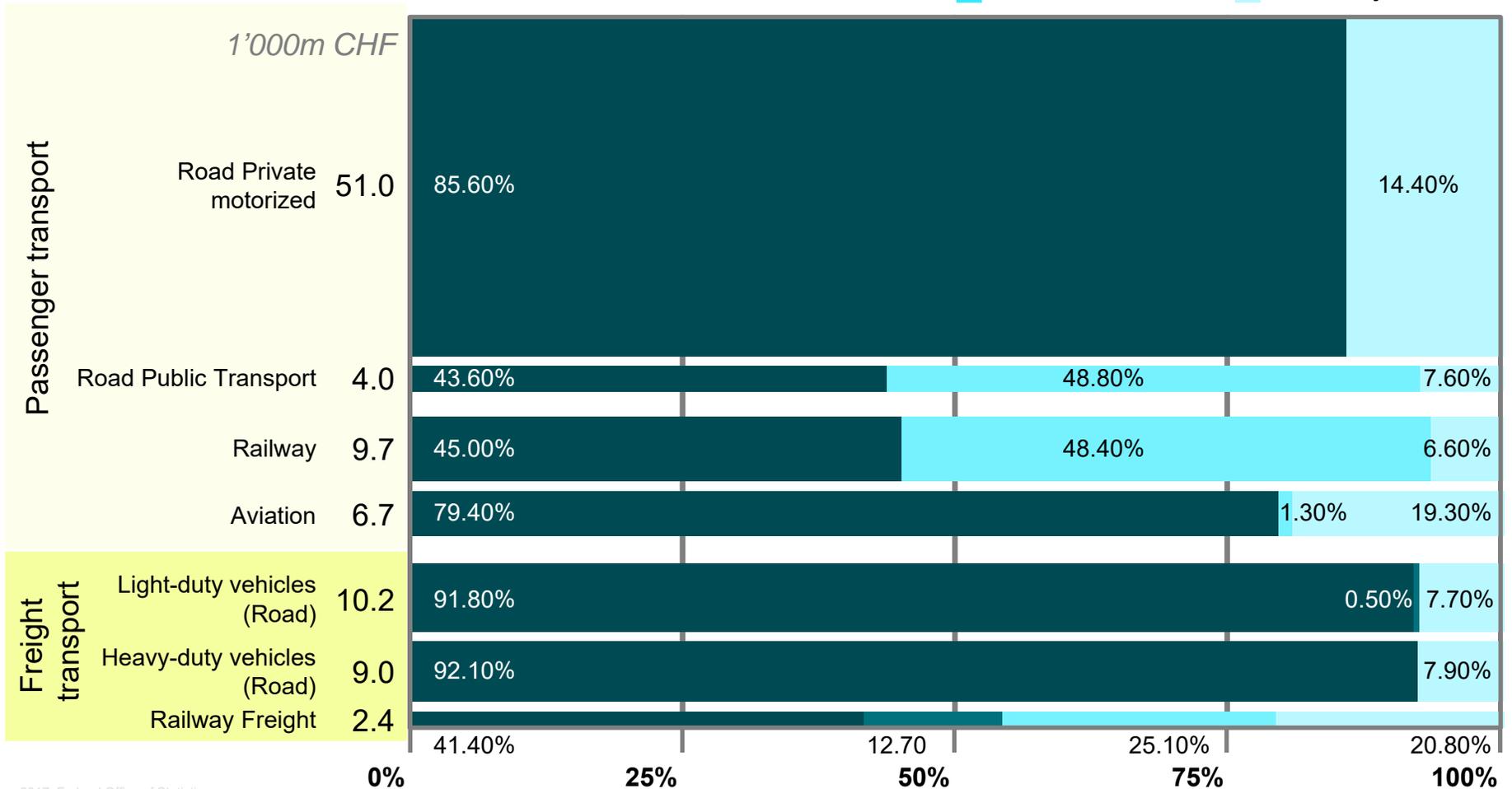
Origin of costs

■ Infrastructure ■ Vehicle
■ Accidents ■ Environment & Health



Final costs bearer

■ Passenger / user ■ Carrier
■ Public sector ■ Community



Airline Fleet 100 aircrafts → 200 Seats/aircraft, SLF 87%, 5 legs/day



Simple example

Airline Fleet 100 aircrafts → in average 87'000 Seats are taken



Airline Fleet 100 aircrafts → in average 2'105 Seats are taken



50% of Aircrafts Owned



Quick reaction

Aircraft sale and leaseback

Rebooking & Alliances

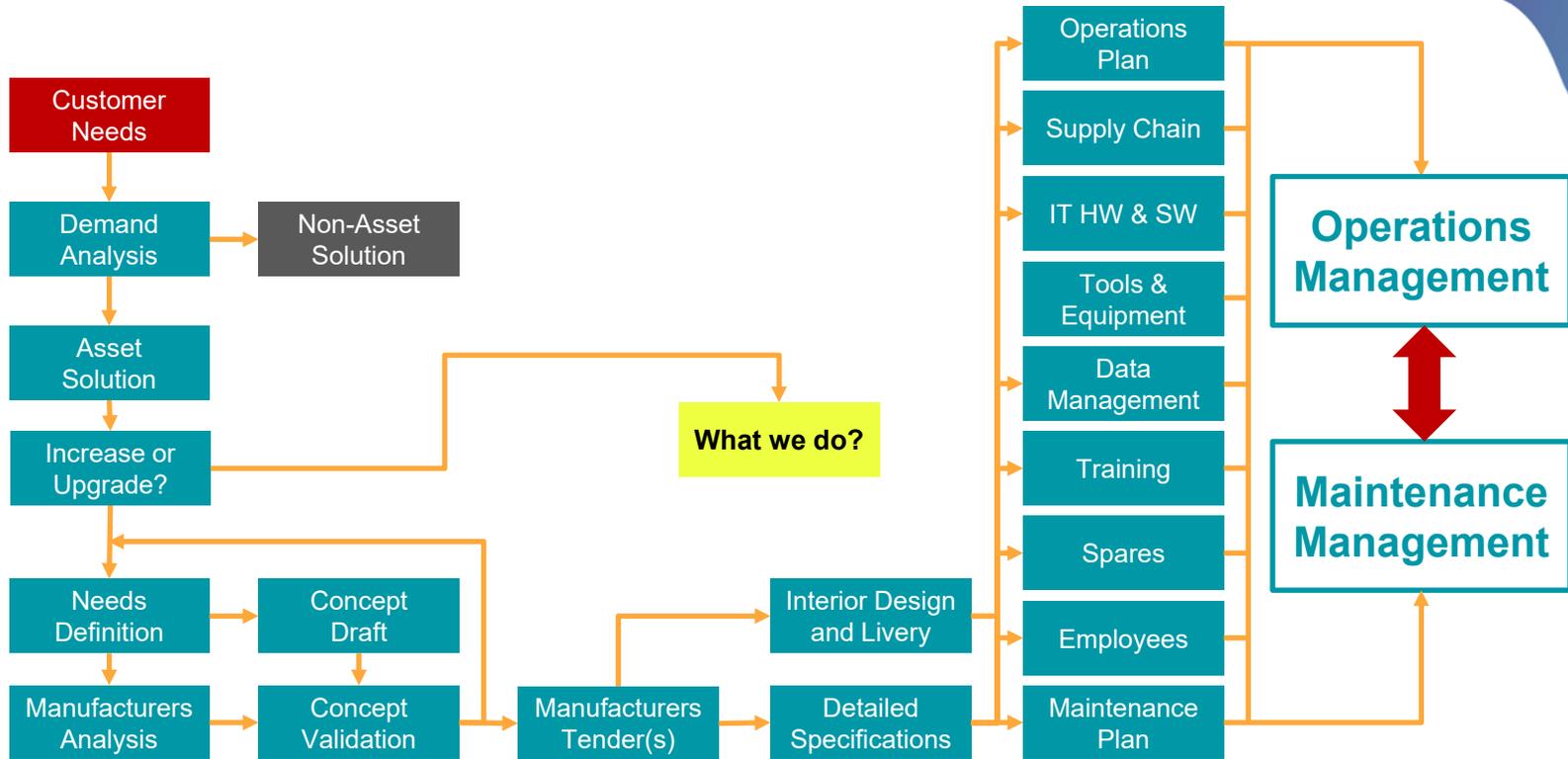
Q2: -97.58%

Earlier return

New SCM / Comp.

Renegotiate lease

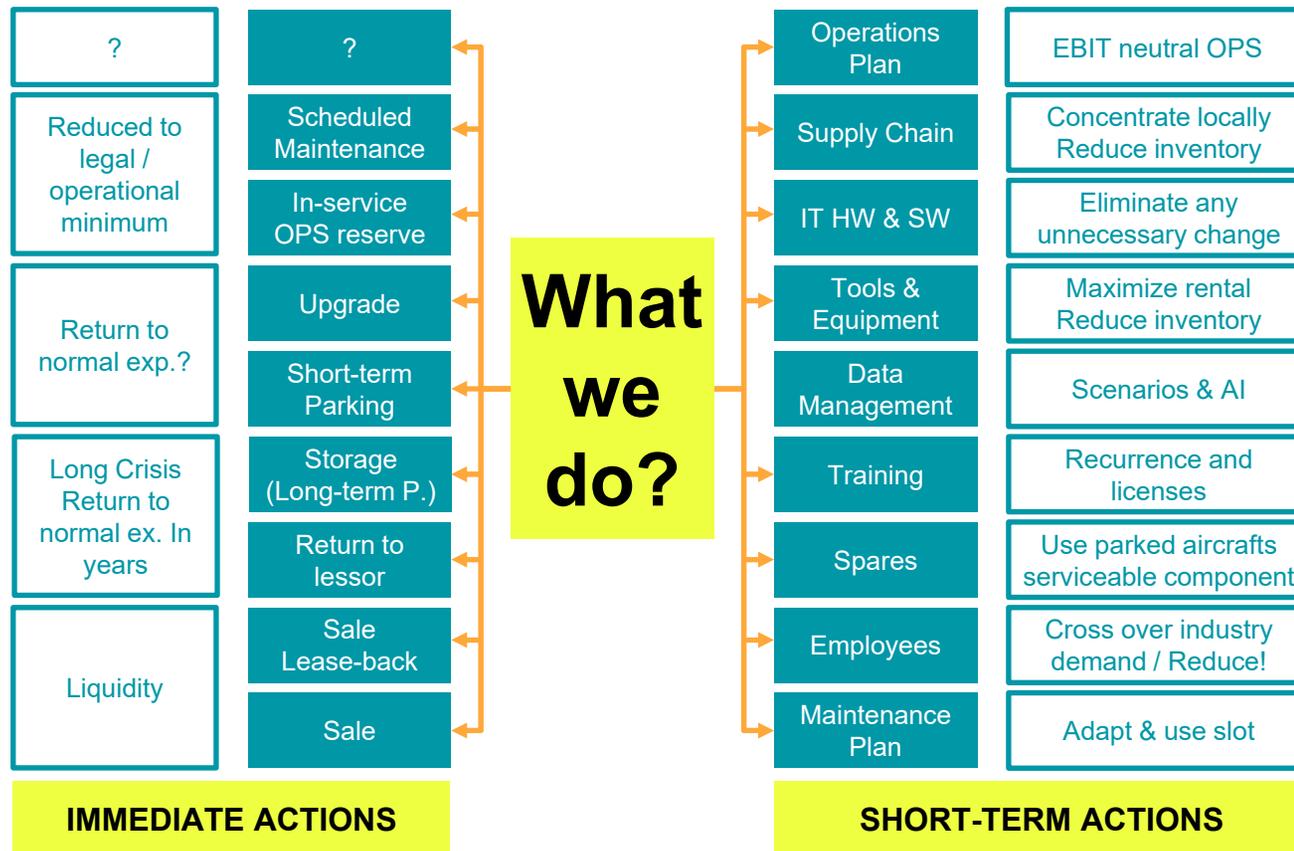
Process & Analysis



Possible actions for PT companies



Possible actions for PT companies



Main Differences Aviation - PT

Aviation

- Dynamic industry, heavy administration
- Scheduling derived by demand
- No subsidies
- Specific skills required for employees
- Relies in international market and growth
- Extremely high Capital Investments
- Very complex and expensive maintenance
- Losses covered by shareholder
- Key sector for economic development
- Very high competition

Public Transportation

- Stagnant industry, relies on the known
- Scheduling derived by demand & governments
- Partially heavy subsidies
- Specific skills required for employees
- Relies in national/local market and growth
- Very high Capital Investments
- Complex and costly maintenance
- Losses covered partially by different states entity
- Key sector for economic development
- System does not allow a real competition

Conclusions

- Act immediately
- Reduce exposure and invested capital immediately (difficult as the competitors are in the same position)
- Cooperation's instead of fierce competition
- Give-in some reductions
- Re-invent the services
- Really think out-of-the-box
- Concentrate on the feasible and on business continuity

NEXT TIME BE PREPARED!

Contacts

Simone Bernasconi
Managing Director MobLab
Viale Officina 18
CH-6500 Bellinzona
Switzerland

s.bernasconi@moblabs.ch

+41 79 559 29 29





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